AcceleraPCI™

Configuration Reference Manual

This manual is a supplement to the AcceleraPCI Installation Guide. Please refer to the Installation Guide for installation instructions.

EVERGREEN™
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Evergreen AcceleraPCI

Configuration Reference Manual

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AcceleraPCI Software

PreQual

Evergreen has designed PreQual as a method of identifying system candidate prior to purchase. The information contained in the PreQual program is much like that of the INSTALL software. PreQual is available at www.evertech.com and also by contacting Evergreen's Customer Care Center.

INSTALL

Evergreen's INSTALL disk(s) – this is a system information utility designed to identify system components and perform a compatibility check. This test is an important initial step in the installation process. This INSTALL disk also captures system configuration information to augment our compatibility database. After performing the upgrade, please follow the instructions for returning the information to Evergreen via email or the postal service.
NOTE: The INSTALL disk does NOT modify your system's hardware or software.

The INSTALL software provides the following information:

- Compatibility test – performs hardware compatibility tests to verify if the *AcceleraPCI* will run in the system
- Performance measurements before and after installing *AcceleraPCI*
- System-specific information
- Motherboard and BIOS-specific notes
- Files for use by Microsoft® Windows9x and WindowsNT® operating systems to brand and model information about PCI devices

Software Updates

Software updates are available on our web site at www.evertech.com. Please compare version information by running the INSTALL disk on your system before downloading an update.

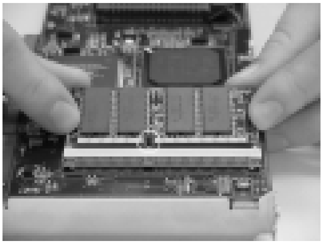
Memory Installation

Requirements

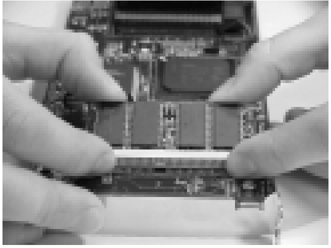
- The memory used on the *AcceleraPCI* must be 32, 64, or 128 MB, PC-66 or PC-100 SODIMM SDRAM. This memory is designed for laptop computers and is available through most resellers.
- For manufacturer details on qualified memory, please visit the *AcceleraPCI* section of www.evertech.com
- *AcceleraPCI* supports up to 256 MB of memory. Because there are only two sockets for memory on the upgrade, you may have to replace the module in the front-side socket with a larger one to achieve your desired amount.
- Memory can be installed one chip at a time or as a pair.
- Always handle the SODIMM memory module by its edges. Do not flex or bend the SODIMM memory module or touch the gold contacts.

Procedure

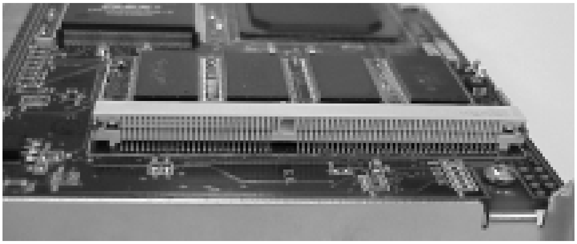
1. Carefully remove the SODIMM memory module from the anti-static bag.
2. Look at the picture below. Notice that both the SODIMM and the socket have a keyed notch on the connector edge (circled). The notch on the socket must align with the corresponding notch on the SODIMM.



3. Holding the module at approximately a 30-degree angle from the card, push the memory module forward to insert the gold edge into the socket. With your thumbs on the top edge of the module and your fingers on the outer edge of the socket (see below), apply even pressure until the SODIMM is firmly seated.



4. Press down on the SODIMM until it clicks into place.



5. Verify that the SODIMM module is evenly and firmly seated in the socket.

6. The memory is installed.

Processor Installation

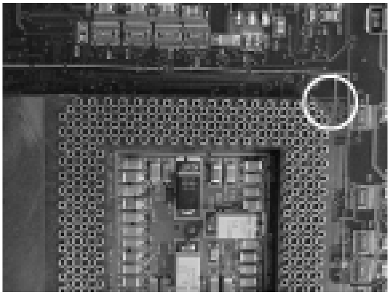
Requirements

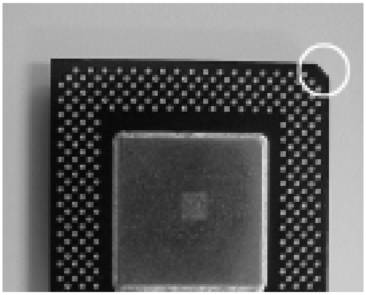
- The processor (or CPU) used on the *AcceleraPCI* must be an Intel® Celeron™ 370-pin PPGA. The Pentium®III requires 1.5volts. This product is not capable of supporting that voltage requirement. The *AcceleraPCI* card has been tested to operate at a 66 or 100 MHz FSB (front side bus). The processor multiplier is pre-set by Intel during manufacturing.
- Prior to handling the processor or *AcceleraPCI*, ground yourself to eliminate any static electricity.
- Align Pin 1 on both the processor and socket.

Procedure

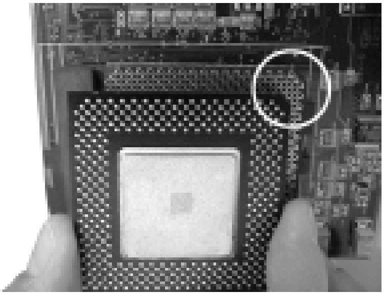
NOTE: There are three large silver capacitors on the non-processor side of the card, which look like small silver barrels. They are very fragile. When you install the processor and memory, be careful not to apply either direct or indirect pressure to these components.

The Pin Grid Array (PGA) socket on *AcceleraPCI* is a LIF (Low Insertion Force) socket. Some pressure is required to install the processor. Observe the Pin 1 locations on the two figures below (circled). The cut corner marks Pin 1 on both the processor and the socket. **These cut corners must be aligned when installing the processor into the socket, otherwise you will damage the processor and may damage the *AcceleraPCI*.**

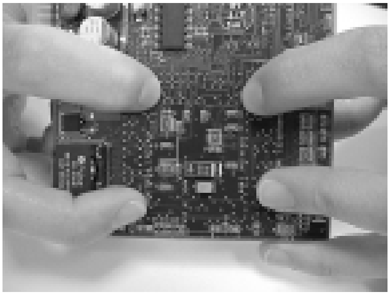




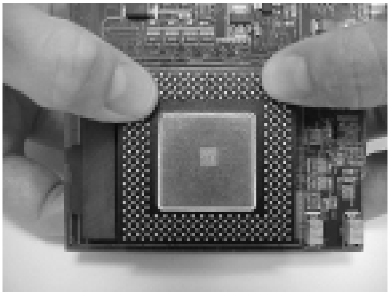
1. Align Pin 1 on the processor and socket (circled) before proceeding. Gently set the processor pins in the socket. Do not apply pressure yet. Verify that the processor and socket are square at all four corners.



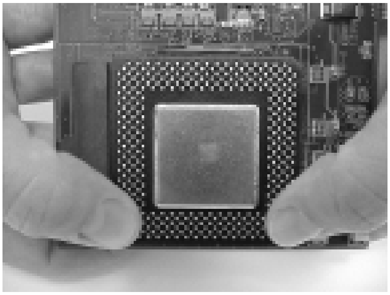
2. Using both hands, lift the card so your thumbs are on the processor and your fingers are on the opposite side of the board, supporting each of the four corners of the processor socket.



3. Gently press two corners of the processor into the socket.



4. Move your thumbs to the opposite two corners and gently squeeze again.



5. Verify that the processor is evenly and firmly seated in the socket.

6. The processor is installed.

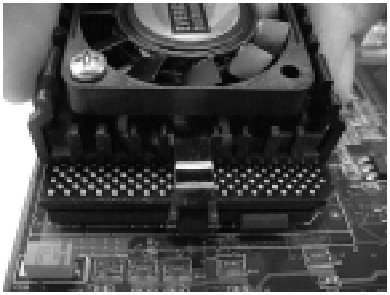
Heatsink/Fan Installation

Requirements

- Solid and secure contact between the processor and the fan/heatsink unit is vital.
- A thermal-conductive adhesive must be used to ensure effective heat dissipation. Apply the adhesive between the pan (top metal plate) of the processor and the fan/heatsink unit.
- Clear unrestricted airflow for the cooling unit is necessary for appropriate operation. Provide a minimum of .25 inch above the fan blades and secure the cables away from the fan blades.
- Verify that the fan blades are spinning when the system is powered.

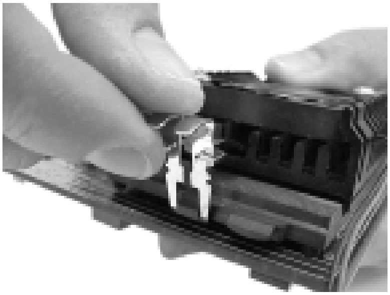
Procedure

1. Apply the thermal adhesive, a two-sided tape. Peel the protective covering from one side and place it on the pan of the CPU. Peel the other protective layer off when you are ready to attach the fan.
2. Install heatsink/cooling fan.
    a) The fan has a retaining clip that passes through the center of the heatsink/cooling fan. It has clips on each end. These clips will connect to the notches on the socket.
    b) Holding the fan, hook the eyehole on the small end of the clip to the tab on the side of the socket as indicated below in the photo.



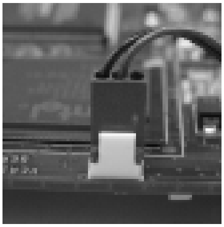
    c) Align the heatsink/cooling fan and processor so the fan is centered over the processor.

d) Push the larger end of the clip down over the tab on the socket.



3. Connect the power wires. The heatsink/cooling fan power connector is near the processor, at the top of the *AcceleraPCI* card. There are three pins; two pins are for power and the third is for a fan sensor.

   The red wire must be on the middle pin and the black on the pin farthest from the processor. Connecting the wires incorrectly may damage the processor and/or system.

4. The heatsink/cooling fan is installed.

AcceleraPCI Specifications

***AcceleraPCI* Bus/Core Speed**
The processor used with the *AcceleraPCI* is an Intel Celeron 370-pin PPGA. The *AcceleraPCI* card has been tested to operate at 66 to 100 MHz FSB (front side bus). The processor multiplier is pre-configured by Intel. During the *AcceleraPCI* memory count, the screen will display both the bus and core speed. Make sure both settings are correct.

Identifying a Non-Bus Mastering Slot (Slave)
On Intel 430NX and 430LX chipsets, there is support for 3 bus mastering slots. (Chipset identification is a function of the INSTALL program.) If a fourth slot exists, the slot would not support the AcceleraPCI.
On Intel 430FX, 430HX, 430TX, 430VX chipsets there is support for four bus mastering slots. If a fifth slot exists, the slot would not support the AcceleraPCI. Other vendor chipsets exhibit similar limitations.

Riser Cards
Due to the number and type of connections on some riser cards, excessive noise may prevent the card from functioning. Please move the card to another slot and retry. Noise may also be reduced, by securing all screws and connections.

System Bus Speeds
The AcceleraPCI operates asynchronously from the motherboard. This is achieved by providing a clock on the card. The system bus speed should not be adjusted. Raising the speed may over-clock the system processor and prevent normal startup operation. Lowering the bus speed will decrease the performance of system components.

AcceleraPCI Troubleshooting Guide

This section is based on the steps outlined in the *AcceleraPCI* Installation Guide. If you cannot resolve your problem with the information provided in this document, please call Evergreen's Customer Care Center at 541-758-7341 for assistance after filling out the contact information beginning on page 29.

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1. Preparing to start.

Problem: Missing disk or documentation from package.

If your product package is missing any documentation or disk(s), please contact Evergreen's Customer Care Center at 541-757-0934 or by email at sales@evertech.com for assistance. Technical support is not available at this number.

Problem: System is Compatible, but *AcceleraPCI* does not support my video card.

The *AcceleraPCI* now supports bus mastering video cards. The PreQual or INSTALL software shipped with this product has not been updated. Please ignore this message.

Problem: System is incompatible.

Evergreen is continually working to make advancements to the *AcceleraPCI* to meet the compatibility requirements of your system. Please rerun an updated version of PreQual™ periodically to check your system's compatibility with *AcceleraPCI.*

2. Open system case.

3. Identify the PCI slots.

Problem: The PCI card will not fit in my system.

Case components, motherboard components and wires can interfere with the installation of the card. Rearranging the order of your PCI or ISA cards may provide a free PCI slot for the *AcceleraPCI*. The *AcceleraPCI* requires one PCI slot for installation.

Problem: I need to rearrange my PCI cards. What should I do first?

When you move any PCI cards, they may become disassociated from their drivers. Please follow these steps if you need to rearrange any PCI cards in your system.

Windows 95 or Windows 98

1. Turn off your system.
2. Ground yourself to discharge any static electricity by touching an unpainted metal surface, such as the unpainted metal portion of the computer chassis.
3. Remove the slot cover screws and rearrange the cards in your system to provide the space necessary to install the *AcceleraPCI.* The slot *AcceleraPCI* is installed in must be a bus-mastering PCI slot that allows .25 inch of clearance for the heatsink/cooling fan. For details on how to determine which slots are bus mastering, check the "AcceleraPCI Specifications" section of this manual.
4. Ensure that the *AcceleraPCI* card is NOT installed in the system yet.
5. Start your computer and allow the operating system to load.
6. When your operating system loads, you may be prompted for driver disks or operating system disks. This process may require multiple system reboot cycles (one to four typically). During these reboots, the PCI devices will be identified and their drivers loaded. After this process is complete, the system will boot normally without prompting you for any more device drivers.
7. After reinstalling the device drivers, verify that all the PCI devices are working properly. This can be achieved by opening the control panel, selecting "System," and then the "Device Manager" tab. A red exclamation mark indicates device problems. A yellow question mark identifies an unknown device.
8. If there are any red exclamation marks, please resolve those issues BEFORE installing AcceleraPCI.
9. If there are yellow question marks, this indicates a driver needs to be updated or installed.
10. Reinstall the *AcceleraPCI* card following the Installation Guide instructions.

WindowsNT

1. Turn off your system.
2. Ground yourself to discharge any static electricity by touching an unpainted metal surface, such as the unpainted metal on your computer chassis.

3. Remove the slot cover screws and rearrange the cards in your system to provide the space necessary to install the *AcceleraPCI.* The slot *AcceleraPCI* is installed in must be a bus-mastering PCI slot that allows .25 inch of clearance for the heatsink/cooling fan. For details on how to determine which slots are bus mastering, check the "AcceleraPCI Specifications" section of this manual.
4. Ensure that the *AcceleraPCI* card is NOT installed.
5. Start your system and allow your operating system to load.
6. When your operating system loads, check the devices in your system to ensure they are operating properly. Windows NT is a non-Plug-and-Play operating system and may require that you delete and re-install the device driver(s) for the PCI card(s) you have rearranged. When deleting and re-installing drivers, you may be prompted for device driver disks or operating system disks.
7. When the device drivers are re-installed and you have verified that all the PCI devices are working properly, continue installing the *AcceleraPCI* following the Installation Guide. You can verify there are no errors by viewing the Event Log located in the "Administrative Tools" section of the Start Menu.
8. If there are any events that are errors, please resolve those issues BEFORE installing AcceleraPCI.

4. Install the card.

5. Reconnect any cables to the system that were disconnected.

6. Restart your system.

Problem: I am not sure what the normal boot process is on my computer.

There are many different processes involved when booting up your system. The process is based on chipsets, bios, and installed hardware and software. Please observe your system and take notes of any readable text prior to installing any new devices. Take note of any changes in the startup procedure. Most new hardware will display messages during the boot process to let you know when it is starting. Watch for any error messages that may occur and write them down.

On the screens below are the specific messages that indicate the *AcceleraPCI* is starting properly. Version number, processor speed and RAM may vary.

The four bulleted items below are informational messages that may appear during startup. There may be other messages on the screen between each of the bullets below.

- On some systems there may be a single line of green text during the PCI bus scan. This indicates the PCI bus has recognized the card.
- On all systems the screen should clear and two lines of green text should appear in the upper left corner of the screen. This indicates the card has started to initialize.
- All systems should show three lines of blue/cyan text. The first line indicates the processor and RAM are initializing on the PCI card. The second line shows the processor and speed. The third shows the memory count.
- All systems should then continue booting up with the operating system starting.

Problem: When the system is turned on, there is an error message about incorrect BIOS/CMOS configuration.

Enter the CMOS setup utility and verify that the settings are correct. Check to make sure the hard drives, floppies, com ports and parallel ports are correct. Save and exit, regardless of whether or not changes were made. NOTE: Some systems may detect the new processor or RAM before the card is fully operational. If you need assistance, please contact the Customer Care Center.

Problem: When the system is turned on, the error message "Operating System not found" is displayed.

Check the ribbon and power connections to the hard drive and the hard drive is recognized by the BIOS/CMOS.

There may be specific BIOS settings to assist, please review the section "System BIOS Settings" on page 27.

Problem: When the system is turned on, the screen stays blank.
Did the INSTALL software warn you about not running this product in your system?

Yes *AcceleraPCI* is currently incompatible with your system. Please contact your reseller for return information.

No This problem can occur if cards are not fully seated, internal or external wires are not completely connected, memory is not fully seated, or if the system is not getting power.

Start with a slow and thorough check of your system.

- Power off your system.
- Check all wires, cards, and RAM.
- Were the power supply and processor fans on your system spinning? If not an electrical short may be occurring, turn off power and contact the Customer Care Center.
- Do you have monitor, keyboard, and system lights?
- Do you hear or see the normal start up process?
- Did you remove or add any other components to the system?

If you are still experiencing difficulties, remove the *AcceleraPCI* and start your system. If your system starts normally without *AcceleraPCI* installed, there may be BIOS or jumper settings you can change that would allow *AcceleraPCI* to initialize. Please refer to the sections “System BIOS Settings” on page 27, or “*AcceleraPCI* DipSwitch settings” on page 28.

Problem: When the system starts, the BIOS will only recognize the original processor, not the AcceleraPCI card.
Your system will utilize the original processor and RAM at boot up. The system displays three things during *AcceleraPCI* initialization:

- A blue/cyan message showing the ETI BIOS starting,
- Processor speed
- A memory test of the RAM in the card. If this does not display, see the section below, “When my system starts, the operating system loads and the *AcceleraPCI* card does not initialize” on page 16.

Problem: When the system starts, the operating system loads and *AcceleraPCI* does not initialize.

There can be several potential causes. Has the card been operational in this system?

Yes If you have you recently added any new devices, please verify operation of the new device. The card, processor or RAM can cause this problem if not fully seated.

No

- The *AcceleraPCI* processor or RAM may not be fully seated.
- The system may have booted too fast for the card to initialize. Press the RESET button on the case. If this is successful, you may need to enable the memory count during POST or disable fast boot in the system BIOS/CMOS.
- The upgrade card may be installed in a non-bus mastering PCI slot. Please move the PCI card to a bus-mastering slot or configure the slot to support bus mastering via the BIOS/CMOS setup utility for your original system. This information can be found in the "AcceleraPCI Specifications" section of this manual on page 9.
- If additional RAM was added to the PCI card, the new memory may not be compatible. Please remove it and install *AcceleraPCI* again. Verify the memory counts up to the correct specifications.
- Please review the section "System BIOS Settings" on page 27.
- Please review the section "*AcceleraPCI* Dip Switch Settings" on page 28.
- *AcceleraPCI* may not be compatible with the motherboard.

Problem: When my system starts, it freezes during the green ETI BIOS load screen.

Did the INSTALL software warn you about not running this product in your system?

Yes *AcceleraPCI* is currently incompatible with your system. Please contact your reseller for return information.

No

- Please review the section "System BIOS Settings" on page 27.
- Please check the memory on the *AcceleraPCI* card. It may not be fully seated, or, if you added additional memory, make sure

it is the correct type (PC-66 or PC-100 SODIMM SDRAM) and that it is correctly installed. Please refer to the section "Memory Installation" on page **2** to confirm the installation process.

Problem: When my system starts, the card freezes during blue/cyan ETI memory count.

Did the INSTALL software warn you about not running this product in your system?

Yes *AcceleraPCI* is currently incompatible with your system. Please contact your reseller for return information.

No
- Please check the memory on the *AcceleraPCI* card. It may not be fully seated, or incompatible memory may have been added.
- Please review the section "System BIOS Settings" on page 27.
- Please review the "*AcceleraPCI* Dip-switch Settings" section on page 28.

Problem: When the system starts, the AcceleraPCI card counts memory, then the screen blanks with a cursor blinking on the left side of the screen.

Does your system have PhoenixBIOS 4.0 Version 6.0?

Yes If the system utilizing the PhoenixBIOS 4.0 Version 6.0, move dipswitch 1 to the off position.

No Please review the section "System BIOS Settings" on page 27. Please check the memory on the *AcceleraPCI* card. It may not be fully seated, or, if you added additional memory, make sure it is the correct type (PC-66 or PC-100 SODIMM SDRAM) and that it is correctly installed. Please refer to the section "Memory Installation" on page 2 to confirm the installation process.

Problem: After installing *AcceleraPCI*, system performance did not increase.

There are five items to consider when determining performance changes.

1. Did the card start? There should be one or two green messages, then a blue message listing the processor speed and memory count. If you do not see these messages, please review the section "When the system starts, the operating system loads and *AcceleraPCI* does not initialize" on page 16.

2. What performance tests are you using to evaluate the performance changes? Are you evaluating performance based on the same tests before and after the installation?
3. Does the performance test measure processor-intensive functions or other peripheral devices? For instance, changing the processor speed will not change the modem speed.
4. Were other changes to the system made that may affect performance testing, e.g. adding memory or changing CMOS settings?
5. If the performance test utilizes "benchmarking" or "system information" software, does the program recognize the processor and RAM correctly?

If you still do not see a performance increase from the *AcceleraPCI* card, please review the section titled "When my system starts, the operating system loads and *AcceleraPCI* does not initialize" on page 16.

7. Start your operating system.

8. Run existing software to make sure your system works correctly.

Problem: The system is unstable or will lock up intermittently.

- Please verify that the *AcceleraPCI* fan is spinning and there is at least .25 inch clearance above the fan unit . This may require that the system cables be secured to allow proper airflow.
- There should not be a gap between the processor and the socket on the *AcceleraPCI* card. In addition, there should not be a gap between the processor and the heatsink/fan.
- Please review the section "System BIOS Settings" on page 27.

Problem: The system is freezes during printing or parallel port operation.

This can be caused by the timing delays in bi-directional printing. Try different settings for the LPT port in the BIOS/CMOS.

AcceleraPCI
POST Code Summary

Note: In this section we will be talking about the host or host system. This refers to the system motherboard.

Power On

The host system will execute the normal POST with full device and memory initialization. During the expansion ROM search the AcceleraPCI (PCI 2.1 compliant) ROM will be found and the initialization code will be executed. The following green text message may be visible for a very short time:

Evergreen Technologies AcceleraPCI upgrade card

After the message has been displayed the rest of the POST is completed as usual. Once the POST is completed, *AcceleraPCI* host board BIOS code is entered and the following green text message is displayed:

ETIBIOS (C) 1998 Evergreen Technologies
Host BIOS version 1.XXXX.I5E
Press <F1> key to run AcceleraPCI Setup

By the time the last line of the above message is displayed, the *AcceleraPCI* upgrade card has started initialization and the initial POST code of 00 is set.

POST Codes

If the AcceleraPCI fails to complete POST, it will display one of the following POST codes which might shed some light on the problem. The POST code represents the last successful event completion.

POST# 00 – The AcceleraPCI host BIOS has started the upgrade card, but the upgrade seems to have failed to initialize the 440ZX chipset.
Potential Problems:

1. Bad install on the processor (not fully seated, bent pin…).
2. There is no fan on the upgrade processor and it has shut down due to heat.
3. Processor is defective or has been over-clocked and has failed as a result.

POST# 01 – The upgrade card has initialized the North Bridge. The failure has occurred on or before the start of memory initialization.

Potential Problems:

1. The SODIMM is incorrectly installed and the SROM can't be read. Try reseating the SODIMM.
2. The connection between the PCI bus and the card is not clean. This can cause R/W errors in the temporary data area. Try gently cleaning the gold fingers with isopropyl alcohol and a cotton swab or a clean pencil eraser.

POST# 02 – The basic 440ZX initialization is complete. This includes SODIMM module initialization before memory testing. If there is a problem with the SODIMM initialization the following message will be displayed in red:

AcceleraPCI Base memory failure – Please check SODIMM installation.

Potential Problems:

1. The SODIMM is incorrectly installed (not fully inserted, not inserted at all).
2. The SODIMM is not PC-66 or PC-100 SDRAM or has a compatibility issue. Please verify the memory is qualified. This information can be found at the *AcceleraPCI* section of www.evertech.com.
3. The upgrade CPU (or processor) fan is not operating correctly and the CPU has overheated and shut down.

POST# 03 – The upgrade memory test completed successfully but the upgrade crashed. This would be a very unusual place to crash and would likely imply the card is unstable.

Potential Problems:

1. The card has been over-clocked and is unstable.
2. The memory is marginal; check the memory installation.
3. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 04 – The AcceleraPCI POST register configuration routine has failed. This would be a strange place to crash and would point to the card being unstable.

Potential Problems:

1. The card has been over-clocked and is unstable.
2. The memory is marginal; check the memory installation.

3. The CPU is not fully seated; check the installation.
4. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 05 – The protected mode memory access initialization has failed. This also implies instability.

Potential Problems:

1. The card has been over-clocked and is unstable.
2. The memory is marginal; check the memory installation.
3. The CPU installation is marginal; check the installation.
4. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 06 – The PCI bus scan used to find the AcceleraPCI relocation address has failed. This code and POST code 18 are equivalent.

Potential Problems:

1. The upgrade card is not properly installed in the PCI slot so there is not a good connection to the bus.
2. The gold fingers on the card edge need to be cleaned. Try a cotton swab and isopropyl alcohol.
3. The bus scan has caused some other PCI card to mis-configure and the upgrade card crashes in sympathy.
4. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 07 – The AcceleraPCI runtime parameter load failed. This would be an unlikely place to crash and would imply general instability.

Potential Problems:

1. The card has been over-clocked and is unstable.
2. The memory is marginal; check the installation.
3. The CPU installation is marginal; check the installation.
4. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 08 – Communications with the host board BIOS failed. At this time we have only experienced this problem on NON-INTEL chipsets.

Potential Problems:

1. The AcceleraPCI connection to the bus is marginal; check the card installation.
2. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 09 – The first attempt to move memory from the host board to the upgrade card has failed. The same issues described in POST #8 apply here. We have also seen some problems with host board SMM (power management) during these memory transactions.

Potential Problems:

1. The host board chipset is not compatible (memory mapping failure)
2. The power management on the host board is incompatible. Check for things like legacy keyboard support (USB) and other specialty functions that might be handled in SMM.
3. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 0A/0B/0C – See post #09 – These three codes represent additional data moves from the host board to the upgrade card.

POST# 0D – The extended memory sizing assignment has failed. An error in the memory calculation could cause the failure.

Potential Problems:

1. The memory is incorrectly installed; check the installation.
2. The memory is marginal; check that it is PC-66/100 SDRAM.
3. The card has been over-clocked and is unstable.
4. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 0E – Several interrupts are called here and the WINTEL system memory map is created for use by Win9X and WinNT. Crashing here would imply general instability or bad interaction with the host board SMM.

Potential Problems:

1. The memory is installed incorrectly; check the installation.
2. The host board SMM code is incompatible in some way. Check for legacy keyboard (USB) and other specialty functions that might be handled in SMM.
3. The card has been over-clocked and is unstable.
4. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 0F - The upgrade card SMM code load failed. This is installed in local memory on the card so a failure here would imply general instability or bad interaction with an SMM function on the host board.

Potential Problems: See POST #0E

POST# 10 – Our attempt to match host board memory shadow has failed. We have seen this only on NON-INTEL chipsets and it would more likely point to general instability or poor interaction with the host board SMM.

Potential Problems: See POST #0E

POST# 10 – Our attempt to match the host board has failed. We have seen this only on NON INTEL chipsets and it would more likely point to general instability or poor interaction with the host board.
Potential Problems: See POST #E

POST# 11 – The PCI bus scan looking for the host board chipset has failed.
Potential Problems:

1. The upgrade card is not installed correctly; check the installation and the gold contacts.
2. The memory is marginal; check the memory installation.
3. The host board SMM is incompatible; check for specialty functions that might be implemented in SMM such as legacy keyboard support or other USB functions.
4. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.

POST# 13 - Interrupts have been restored and the card has died. This might point to general instability or incompatibility with some SMM functions on the HOST board.
Potential Problems: See POST# 11

POST# 14 – The first messages displayed by the AcceleraPCI card have been sent to the screen and at this point the POST codes become less reliable. During this process, the CPU (processor) type and speed are determined along with the posting of the following blue/cyan text message to the screen:

Intel Celeron A ™ MMX CPU at xxx MHz
Bus at xxx MHz

POST# 15 – At this time the extended memory test should be counting up the upgrade memory on the screen. If it fails a message will be displayed on the screen with a failure address.
Potential Problems:

1. The memory is incorrectly installed; check the installation.
2. The upgrade has been over-clocked and is unstable.
3. The upgrade CPU fan is not operating correctly and the CPU has overheated and shut down.
4. The host board SMM code is incompatible. Check for specialty functions that might be implemented in SMM such as legacy USB support.

POST# 18 – See POST#06

POST# 19 – The extended memory test failed. See POST# 15

POST# 1A – The AcceleraPCI POST code was unable to identify the host chipset. Potential Problems:

1. The connection between the CPU and the host chipset is faulty. Check the CPU installation.

POST# 1B – The acceleraPCI POST code was unable to identify the onboard north bridge.

Potential Problems:

1. The connection between the CPU and the north bridge is bad. Check the CPU installation

POST# 1C -- The acceleraPCI POST code was unable to detect base memory (0-640k). This POST code might be displayed in combination with the "check SODIMM installation" message.

Potential Problems:

1. The SODIMM installation is bad or the SODIMM module is incompatible or failed.

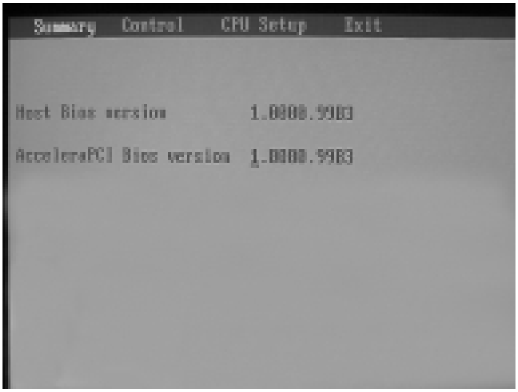
POST#1D – The POST is essentially complete. The memory area between D8000-D8fff is made R/W and original host registers are restored before boot is completed.

AcceleraPCI BIOS Setup Screens

To gain access to the *AcceleraPCI* BIOS setup screen, press the F1 key during the *AcceleraPCI* BIOS boot process. There are four menu screens for the BIOS setup which include Summary, Control, CPU Setup and Exit.

1. Summary

This screen provides BIOS version information for *AcceleraPCI*.



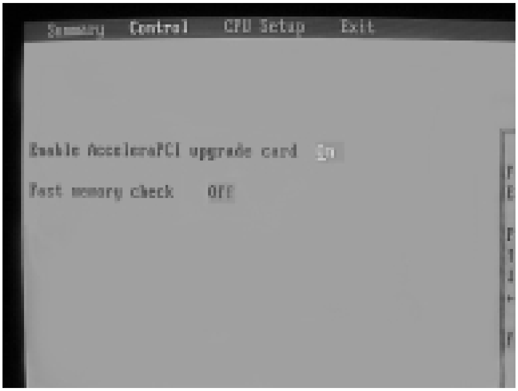
Host Bios version 1.0000.9983

AcceleraPCI Bios version 1.0000.9983

2. Control

Enable *AcceleraPCI* Card:
Options are ON and OFF; default is ON. Even if the setting is on OFF, you can still access this BIOS configuration program to enable the card.

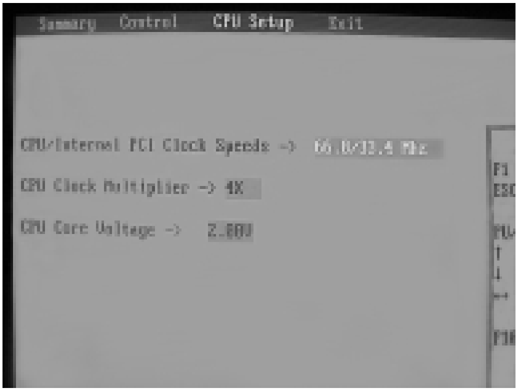
Fast memory check:
Options are ON and OFF; default is OFF. OFF will disable the memory test during initialization.



Enable AcceleraPCI upgrade card On

Fast memory check OFF

3. CPU Setup



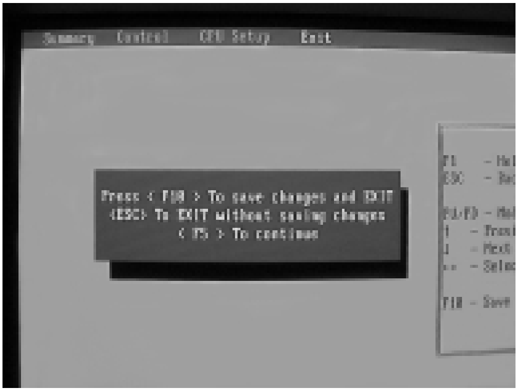
```
CPU/Internal PCI Clock Speeds -> 66.8/33.4 Mhz
CPU Clock Multiplier -> 4X
CPU Core Voltage -> 2.00V
```

CPU/Internal PCI clock Speeds:
Options start at 66 MHz; default is 66.8 MHz. The processor on the card is designed for this speed. Do not change this setting. By doing so, the processor will be operating out of specifications, which may cause intermittent failure. Over-clocking the CPU will also generate extra heat in the system which may cause long term damage.

CPU Clock multiplier:
The Intel Celeron processor distributed with *AcceleraPCI* card is clock-locked by Intel. Changing this setting will have no effect.

CPU Core voltage:
The default setting is 2.00 V. Do not change this setting . Incorrect voltage can cause intermittent operation, generate extra heat in the system and damage the processor or system components.

4. Exit



```
Press < F10 > To save changes and EXIT
<ESC> To EXIT without saving changes
< F5 > To continue
```

<F10> saves changes and restarts the system

<ESC> to exit without saving

<F5> to continue working in the BIOS configuration program.

System BIOS Settings

Problem: Need BIOS settings to assist with compatibility.
Solution: Depending upon the manufacturer of your system's original BIOS, there may be some settings that can be adjusted to increase compatibility. Do not be concerned if you do not see all of the setting options.

AMI BIOS	To access the BIOS configuration utility press <Del> or <F1> during POST or memory count
Award™ BIOS	To access the BIOS configuration utility press <Del> during POST
Phoenix® BIOS :	To access the BIOS configuration utility press <F2> during POST

Advanced Settings:		
	USB Legacy Mode	Set to disabled
Peripheral configuration:		
	Legacy USB support	Set to disabled
PCI Configuration:		
	Bus mastering	Set to enable
Boot:		Set the hard drive to primary. If a bootable ISA card is the first option, it may not allow the system to boot.
	Hard drive	Set to enable
Integrated peripherals:		
	USB keyboard support	Set to disabled

AcceleraPCI
Dip Switch Settings

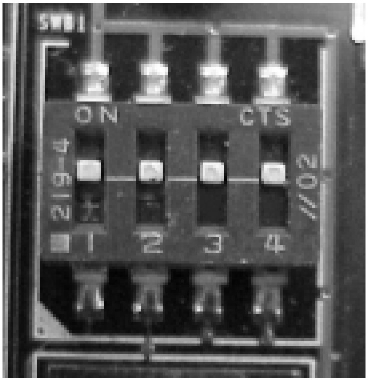
AcceleraPCI Dip Switch Settings

The *AcceleraPCI* has a single bank of dip switches. The dip switches are located on the non-processor side of the card next to the hold down bracket (see picture of dip switches below).

Change these settings only when the INSTALL software reports that your system is compatible, but you are having problems initializing the *AcceleraPCI.*

1	ON	Standard BIOS versions (default)
	OFF	For Phoenix BIOS version 4.00 Revision 06
2	ON	Reserved (default)
3	ON	Primary Boot Mode (default)
	OFF	Secondary Boot Mode
4	ON	Reserved (default)

The dip switches slide from the ON side to the OFF side. Be careful when changing settings. Ensure that the power to the system is off and use a small point to move the switch, such as the end of a paperclip.



Contact and System Information Form

When contacting the Customer Care Center, please have the following information available.

Contact Information

Name ______________________________

Phone number ______________________________

Fax number ______________________________

E-Mail ______________________________

Specific Problems:

System Information (available in the register.txt file on the INSTALL disk.)

Brand ______________________________

Model ______________________________

Motherboard ______________________________

Chipset ______________________________

Bios MFG ______________________________

Bios Version ______________________________

Bios Date ______________________________

MBID FN ______________________________

Operating System ______________________________

(continued next page)

AcceleraPCI

RAM added to *AcceleraPCI* card:

PCI devices	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
Device					
Brand					
Model					
Device ID					
Vendor ID					

Please have details about specific error messages and information regarding messages displayed before the error occurred or system locked.

There are several files on the INSTALL disk that are useful to our technicians in troubleshooting the system. Please have this information available or e-mail these files along with your request for assistance to techsupport@evertech.com .

*.ETB (any file that ends in ETB)
REGISTER.TXT
LOG.DAT
PCICONFG.TXT
SYSTEST.DAT

Some of the above files may not exist for all systems.

Evergreen Customer Care Center Contact Information

Americas

Web: www.evertech.com
E-mail: techsupport@evertech.com
Voice: 541-757-7341
Fax: 541-758-9851

Europe

Web: www.evertech.co.uk
E-mail: techsupport@evertech.co.uk
Voice: 44-0-1793-601333
Fax: 44-0-1793-539799